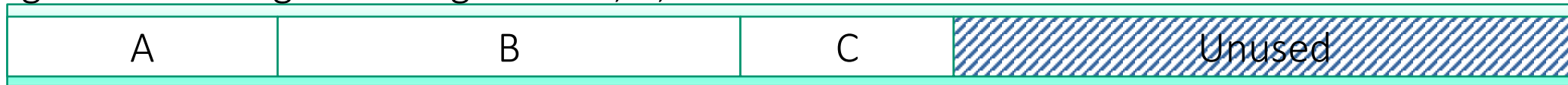


# What makes fixed-length data so hard?

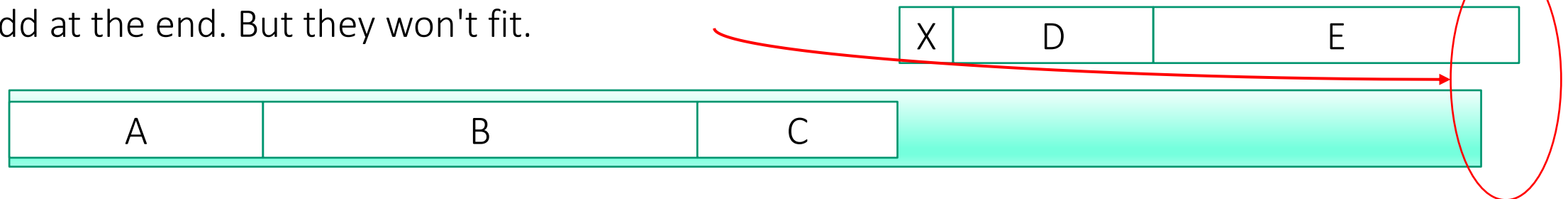
Original Fixed-length message with A, B, C fields



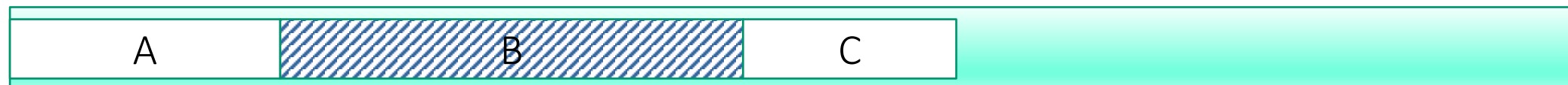
Requirements evolve - want to add D, E fields, but be backward compatible

Add flag bits (X) at end of current data. 0 = original, 1 = extended.

So add at the end. But they won't fit.



Ah ha! Turns out when D, E, are in use, B is not needed.



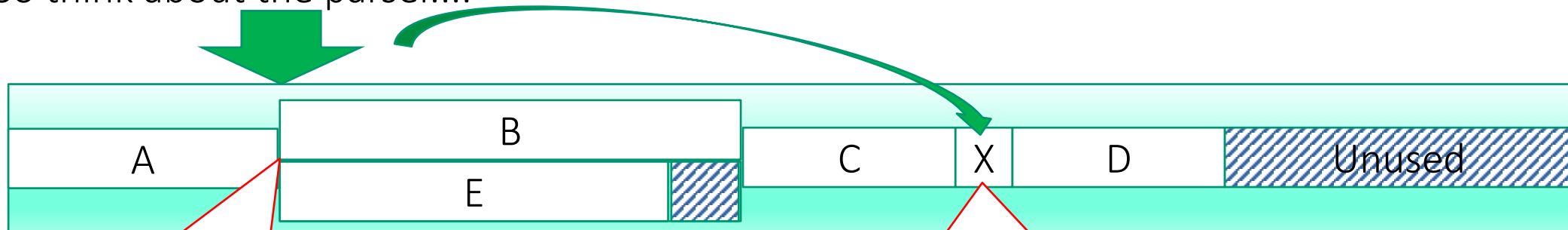
So we re-purpose B's space to hold E for the extended message.

# What makes fixed-length data so hard?

... the extended message looks like this:



So think about the parser....



In order to know whether to parse B or E.....

....parser must look *ahead* to this flag field.